

What is claimed is:

1. A process for controlling the heating of glow plugs of a diesel engine, comprising the steps of:

emulating the thermal behavior of the glow plugs during both heating and cooling, and using temperature feedback of the emulation as a control value for controlling the heating of the glow plugs.

2. The process as claimed in Claim 1, wherein the temperature feedback of the emulation is compared to a reference temperature which corresponds to the ambient temperature.

3. The process as claimed in Claim 1, wherein the temperature feedback of the emulation is corrected such that it is independent of the engine operating conditions.

4. The process as claimed in Claim 3, wherein the correction is carried out by the emulation being limited by a fixed value.

5. The process as claimed in Claim 3, wherein the correction is made, during emulation, by detected energy inputs being correlated with available engine operating parameters and being taken into consideration during emulation.

6. A device for controlling the heating of the glow plugs of a diesel engine, comprising:

an electronic control for controlling the heating flow of the glow plugs,

wherein a physical model of the glow plugs is provided in the form of a physical energy storage whose energy state is proportional or inversely proportional to glow plug temperature and is provided a reference signal to the electronic control.

7. The device as claimed in Claim 6, wherein the physical energy storage is a condenser having a load state that is proportional to glow plug temperature.

8. The device as claimed in Claim 6, wherein the physical energy storage is a resistance temperature element with positive or negative resistance temperature coefficients whose resistance is proportional to glow plug temperature.

9. The device as claimed in Claims 6, further comprising a memory to which an output signal of the physical model is applied.

10. The device as claimed in Claim 4, further comprising a correcting module which modifies controlling of the physical model by the electronic control depending on engine operating ratios.

11. The device as claimed in Claims 6, further comprising a comparative module for comparing an output signal of the physical model with ambient temperature.